ADJUSTABLE ANODES FOR DIAPHRAGM CHLOR-ALKALI ELECTROLYZERS

ABSTRACT

It is described a newly designed anode suitable for bipolar type diaphragm chlor-alkali electrolyzers characterised by being made of two parallel opposed titanium sheets provided with openings and a catalytic coating for chlorine evolution, and with an elastically responding expansion device fixed to each surface of the two sheets, wherein the opening of the expansion device and thereby of the sheets fixed thereto is adjusted by a mobile pivot comprising two sections of different diameter and a spring. The spring is compressed when the anodes are assembled in the electrolyzer allowing the sliding of the pivot causing the two sheets to spread out. Hence, the distance between sheets and cathode-supported diaphragms is decreased or even suppressed depending on the regulation of the device effected before assembling and the operating electric voltage of the electrolyzer results substantially reduced. During the dismantling effected in the maintenance phase the spring spreads out causing the pivot to return to the rest position with consequent contraction of the sheets, so that the extraction of the anodes may easily occur with no risk of mechanical damaging.